

**REMARKS****Disposition of Claims**

Claims 201-218 are pending in this application. Claim 201 is independent. The remaining claims depend, directly or indirectly, from claim 201.

**Rejections under 35 U.S.C § 102**

Claims 201-204, 206, 207, 210-212, 217, and 218 were rejected under 35 U.S.C. § 102 as being anticipated by U.S. Patent No. 5,174,374 (Hailey). Claim 201 has been amended to clarify the present invention. To the extent that the Examiner maintains the rejection, the rejection is respectfully traversed.

Claim 201 recites an expandable reaming tool that includes at least two reamer pads, at least one blade formed on each of the at least two reamer pads, and a plurality of cutting elements disposed on the blades. The at least two reamer pads are operatively coupled to a tool body and adapted to be displaced between a retracted and an expanded position. Further, claim 201 recites that the plurality of cutting elements are arranged so as to substantially balance at least one parameter selected from axial force, lateral force, work, and mass between the at least two reamer pads. For clarity, claim 201 has been amended to recite that the reaming tool is configured to ream while drilling. This amendment is supported throughout the specification and does not constitute new matter.

As a preliminary matter, the Applicant respectfully asserts that Hailey fails to disclose what those of ordinary skill in the art consider to be a reamer. The expandable cutting tool disclosed by Hailey is designed for cutting sections of tubing disposed in the wellbore. With reference to Figure 2, the expandable cutting tool is operated by expanding the cutter blades 24a and 24b until they progress to the inner wall of the tubing to be cut, after which the expandable

cutting tool may be raised and lowered with repetition to accomplish the desired cutting (column 2, lines 45-58). Applicant notes that this cutting is not equivalent to reaming as defined by those of ordinary skill in the art. Further, the expandable cutting tool disclosed by Hailey is incapable of reaming while drilling because of the arrangement of cutting blades to only cut in an upward direction. Thus, Hailey cannot be considered to anticipate a reaming tool configured to ream while drilling, as recited in claim 201

As noted above, the configuration of the cutting tool disclosed by Hailey precludes the blades 24a and 24b from being considered as reaming blades; however, assuming *arguendo* that Hailey did constitute a reaming tool with reaming blades, the structure disclosed by Hailey fails to show or suggest the other limitations recited in claim 201. In the Office Action, the Examiner described Hailey as disclosing reamer pads 24a and 24b, at least one blade (30a, 30b) formed on at least one of the reamer pads, and a plurality of cutting elements 55. Applicant notes that Hailey discloses that items 24a and 24b are *blades* that are moveable from a retracted to an extended position (Figures 1 and 2, column 2, lines 8-17). Hailey further discloses that items 30a and 30b are *inserts* secured to the blades 24a and 24b (column 2, lines 33-44). Item 55, described by the Examiner as a plurality of cutting elements, only appears in Figure 5, which shows an insert 30. Item 55 is described by Hailey as “an overlay of thermally stable polycrystalline diamond (TSP) (column 2, line 38).” Thus, Hailey discloses moveable blades 24a and 24b having one or more inserts 30 disposed thereon. Accordingly, Hailey cannot be considered to anticipate a reaming tool having a plurality of cutting elements disposed on a blade that is disposed on a reaming pad.

In view of the above, Hailey fails to show or suggest the present invention as recited in claim 201 as amended. Thus, claim 201 is patentable over Hailey. Dependent claims are

allowable for at least the same reasons. Accordingly, withdrawal of this rejection is respectfully requested.

**Rejections under 35 U.S.C § 103**

*Item 4*

Claims 207-210, 213-215, 217, and 218 were rejected under 35 U.S.C. § 103 as being obvious over Hailey in view of U.S. Patent No. 4,431,065 (Andrews). Claim 201, from which claims 207-210, 213-215, 217, and 218 depend, has been amended to clarify the present invention. To the extent that the Examiner maintains the rejection, the rejection is respectfully traversed.

As discussed above, Hailey fails to show or suggest the present invention as recited in claim 201. Andrews fails to show or suggest that which Hailey lacks with respect to claim 201. Specifically, Andrews discloses a movable cutting arm (*i.e.* a blade) having cutting elements disposed thereon. Andrews fails to show or suggest, among other things, a plurality of cutting elements disposed on a blade disposed on a movable reamer pad, as recited in claim 201. Accordingly, claims 207-210, 213-215, 217, and 218 are patentable for at least the same reasons.

With respect to the Official Notice taken by the Examiner, the limitations in claims 208-210, 213, 214, 217, and 218, which the Examiner asserts as common knowledge, are only described by the Examiner with respect to prior art drill bits. Applicant notes that, due to the difference in function and cutting arrangement of a reamer compared to a drill bit, the existence of teachings with respect to drill bits does not inherently apply to reamers. If the Examiner maintains the assertions set forth in this rejection, Applicant respectfully requests that the Examiner provide documentary evidence supporting the assertions as to what is known with respect to drill bits and the motivation to combine said knowledge to reamers. 37 C.F.R. §1.104(c)(2). See also *In re Zurko*, 258 F.3d 1379, 1385 (Fed. Cir. 2001) (“[T]he Board [or

examiner] must point to some concrete evidence in the record in support of these findings” to satisfy the substantial evidence test). If the Examiner is relying on personal knowledge to support the finding of what is known in the art, Applicant respectfully requests that the Examiner provide an affidavit or declaration setting forth specific factual statements and explanation to support the finding, as required under 37 C.F.R. § 1.104(d)(2).

In view of the above, Hailey and Andrews, whether considered separately or in combination, fail to show or suggest the present invention as recited in claims 207-210, 213-215, 217, and 218. Thus, claims 207-210, 213-215, 217, and 218 are patentable over Hailey and Andrews. Accordingly, withdrawal of this rejection is respectfully requested.

Item 5

Claims 201-204 and 206-218 were rejected as being obvious over Andrews in view of U.S. Patent No. 6,629,893 (Beaton) or U.S. Patent No. 6,516,293 (Huang). Claim 201 has been amended to clarify the present invention. To the extent that the Examiner maintains the rejection, the rejection is respectfully traversed.

As discussed above under Item 4, Andrews discloses a movable cutting arm (*i.e.* a blade) having cutting elements disposed thereon. Accordingly, Andrews cannot be said to show or suggest a plurality of cutting elements disposed on a blade disposed on a movable reamer pad, a component that lacks in Andrews. The Examiner asserts that either Beaton or Huang may be relied upon to render obvious the limitation that “the plurality of cutting elements are arranged so as to substantially balance at least one parameter selected from axial force, lateral force, work, and mass between the at least two reamer pads.” When combined, Andrews, Beaton, and Huang still fail to disclose a plurality of cutting elements disposed on a blade disposed on a movable reamer pad, as recited in claim 201. Accordingly, neither Beaton nor Huang can suggest the balancing of any of the recited parameters between the at least two reamer blades.

With respect to the Official Notice taken by the Examiner, the limitations in claims 208-210, 212-214, 217, and 218, which the Examiner asserts as common knowledge, are only described by the Examiner with respect to prior art drill bits. If the Examiner maintains the assertions set forth in this rejection, Applicant respectfully requests that the Examiner provide documentary evidence under 37 C.F.R. §1.104(c)(2) supporting the assertions as to what is known with respect to drill bits and the motivation to combine said knowledge to reamers, or alternatively, an affidavit or declaration under 37 C.F.R. § 1.104(d)(2).

In view of the above, Andrews, Beaton, and Huang, whether considered separately or in combination, fail to show or suggest the present invention as recited in claim 201. Thus, claim 201 is patentable over Andrews, Beaton, and Huang. Dependent claims 202-204 and 206-218 are allowable for at least the same reasons. Accordingly, withdrawal of this rejection is respectfully requested.

Item 6

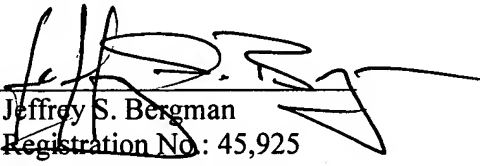
Claim 205 was rejected as being obvious over Hailey or Andrews in view of Beaton or Huang, and further in view of U.S. Patent No. 5,979,576 (Hansen) or U.S. Patent No. 6,142,250 (Griffin). Claim 201, from which claim 205 depends, has been amended to clarify the present invention. To the extent that the Examiner maintains the rejection, the rejection is respectfully traversed.

As discussed above, Haley, Andrews, Beaton, and Huang, whether considered separately or in combination, fail to show or suggest the present invention as recited in claim 201. Hansen and Griffin, for which the Examiner relies on as evidence of vibration damping inserts, fail to provide that which Haley, Andrews, Beaton, and Huang lack. Accordingly, claim 205 is patentable over Haley, Andrews, Beaton, Huang, Hansen, and Griffen, and withdrawal of this rejection is respectfully requested.

In view of the above, each of the claims in this application is believed to be in immediate condition for allowance. Accordingly, the Examiner is respectfully requested to withdraw the outstanding rejection of the claims and to pass this application to issue. Applicant believes no fee is due with this request. However, if a fee is due, please charge our Deposit Account No. 50-0591, under Order No. 05516/089003 from which the undersigned is authorized to draw.

Dated: 3/15/05

Respectfully submitted,

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